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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,187	03/30/2004	Katsuyuki Taguchi	250115US2XBIR	3368
22850	7590	07/14/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KAO, CHIH CHENG G	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,187

Applicant(s)

TAGUCHI, KATSUYUKI

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/30/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

See page 1 in paragraph 1, "<http://www3.toshiba.co.jp/medical/4d-ct/>".

3. The specification is objected to because of the following informality, which appears to be a minor draft error including drawing inconsistencies.

In the following format (location of objection; suggestion for correction), the following correction may obviate the objection: (page 6, paragraph 22, "Figure 6 illustrates"; replacing "Figure 6 illustrates" with - -Figures 6a through 6c illustrate- -).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-9, 11-14, and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsieh (US Patent 6587537).

5. Regarding claims 1 and 16, Hsieh discloses a method and computer program product storing instructions for execution on a computer system, which when executed by the computer system, causes the computer system to perform (col. 4, lines 1-12) the following steps of obtaining projection data (col. 3, line 35) from at least two detector rows in a CT system (col. 3, line 28), filtering the projection data in a direction of the at least two detector rows to obtain filtered data in which windmill artifacts would necessarily be reduced due to the z-axis filtering (col. 4, lines 35-42), and reconstructing image data from the filtered data (col. 5, lines 51-52).

6. Regarding claims 6 and 11, Hsieh discloses an apparatus (fig. 2) comprising a helical scanning device configured to collect projection data while at least one of a gantry and a couch moves along an axial direction of the couch (col. 2, lines 44-50), the helical scanning device including, an X-ray source configured to generate X-rays (fig. 1, #14), and a detector having detector elements (fig. 3, #20) arranged in at least two detector rows (col. 3, lines 28-29) along

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the axial direction and configured to produce the projection data (col. 3, line 35), and a processor (col. 4, lines 1-12) comprising a means for filtering the projection data in a direction of the at least two detector rows to obtain filtered data in which windmill artifacts would necessarily be reduced due to the z-axis filtering (col. 4, lines 35-42), and a reconstructing device configured to reconstruct the filtered data (col. 5, lines 51-52).

7. Regarding claims 2, 7, 12, and 17, Hsieh further discloses wherein the filtering is performed in relation to at least one of a ray angle and a distance from an iso-center to a detector cell (col. 5, line 10).

8. Regarding claims 3, 8, 13, and 18, Hsieh would necessarily have filtering performed (col. 5, line 10) in relation to a distance from an iso-center to a voxel on a ray-sum where the ray-sum coincides with an xy-plane, since the performed filtering has some sort of relationship with the isocenter, the ray-sum, and the xy-plane.

9. Regarding claims 4, 9, 14, and 19, Hsieh further discloses the reconstructing including backprojecting (col. 3, lines 7-8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5, 10, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsieh as applied to claim 4, 9, 14, and 19 above, and further in view of Feldkamp et al. ("Practical cone-beam algorithm").

Hsieh discloses a method, apparatus, and program product as recited above.

However, Hsieh does not disclose backprojecting including Feldkamp reconstruction.

Feldkamp et al. teaches backprojecting including Feldkamp reconstruction (title and abstract).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method, apparatus, and program product of Hsieh with the backprojecting of Feldkamp et al., since one would be motivated to make such a modification for making smaller errors and more convenient computation (abstract) as shown by Feldkamp et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

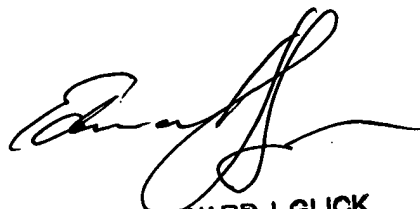
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gk



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER